

## REMARKS

Applicants thank the Examiner for a telephone interview with the undersigned representative on February 22, 2006. During the interview, the content of the Advisory Action dated February 15, 2006, was discussed.

Claims 40-70 were considered in the Office action dated November 28, 2005, and in the Advisory Action dated February 15, 2006, and were rejected under 35 U.S.C. 103(a). Without acquiescing to the rejections, Applicants amend claims 40-43, 45, 46, 48, 50, 51, 56, 64, 65, and 70; Applicants cancel without prejudice claims 47, 57-61, and 67; and Applicants add new dependent claims 71-80, as indicated in the Listing of Claims in this paper. Following entry of this paper, claims 40-46, 48-56, 62-66, and 68-80 will be pending. Applicants respectfully request reconsideration and withdrawal of all grounds of rejection, and passage of the claims to allowance.

### All amendments and new claims are supported in the Specification as originally filed

All amendments and new claims are supported in the specification as originally filed; no new matter is added.

Independent claim 40 is amended to recite, in part, “characterizing an acetowhitening signal ...” and “analyzing the acetowhitening signal ...”. This amendment is supported in the specification as originally filed, for example, at page 9, lines 19-21; at page 10, lines 16-17; and at page 16, lines 18-20, reproduced as follows, as well as in Figure 2B [emphasis added]:

According to one embodiment, the method includes determining the segmented regions of the test sequence of images by analyzing an acetowhitening signal.

Figure 2B depicts the characterization of a discrete signal from a sequence of images of tissue according to an illustrative embodiment of the invention.

Figure 2B depicts the characterization 206 of a discrete signal  $w(i,j;t)$  from a sequence of images of tissue according to an illustrative embodiment of the invention. The signal could be any type of image signal of interest known in the art.

Further detail of an illustrative embodiment is described, for example, at page 16, line 22, to page 17, line 23. Dependent claims 41-43, 45, 46, 48, 50, and 51 are amended in keeping with the amendment of claim 40; no new matter is added thereby.

Independent claim 56 is amended to recite, in part, “creating a segmentation mask that represents an image plane divided into regions ...”. This amendment is supported in the

specification as originally filed, for example, at page 6, lines 3-5, and at page 6, lines 9-11, reproduced as follows [emphasis added]:

According to one embodiment, the step of relating images based on the segmentation includes determining a segmentation mask of an image plane, where two or more regions of the image plane are differentiated.

According to one embodiment, the step of relating images includes creating or using a segmentation mask that represents an image plane divided into regions that exhibit similar behavior throughout the plurality of images.

Dependent claims 64 and 65 are amended in keeping with the amendment of claim 56; no new matter is added thereby.

Independent claim 70 is amended in a manner similar to claim 40, with support in the original specification as indicated above; no new matter is added thereby.

New dependent claims 71-80 are supported by the original specification; no new matter is added thereby. Claims 71-77 depend either directly or indirectly from independent claim 70, and correspond to original dependent claims 62, 64, 65, 66, 68, and 69; no new matter is added. Claims 78 and 79 include a subset of a group of conditions listed in claims 49 and 66, respectively; no new matter is added. Claim 80 is supported in the original specification, for example, at page 9, lines 19-21, and at page 16, line 22 to page 17, lines 23. No new matter is added.

Amended independent claims 40, 56, and 70 are patentable over the cited art

Without acquiescing to the arguments in the aforementioned Office action and Advisory Action, Applicants amend the independent claims to further distinguish the invention from the cited art. Applicants respectfully contend that amended independent claims 40, 56, and 70 are novel and non-obvious in light of any valid combination of the cited references. Applicants request withdrawal of the rejections of these claims and passage of the claims to allowance in due course.

Dependent claims claims 41-46, 48-55, 62-66, 68, 69, and 71-80 are patentable over the cited art

Each of claims 41-46, 48-55, 62-66, 68, 69, and 71-80 depends either directly or indirectly from one of claims 40, 56, and 70. Since the cited art teaches or suggests fewer than all of the limitations of any of the independent claims 40, 56, and 70, it follows that the cited art teaches or suggests fewer than all of the limitations of any of dependent claims 41-46, 48-55, 62-66, 68, 69, and 71-80, and all of these dependent claims are patentable over the cited art. Applicants request withdrawal of the rejections of these claims and passage of the claims to allowance in due course.

**CONCLUSION**

In view of the foregoing, Applicants respectfully request allowance of claims 40-46, 48-56, 62-66, and 68-80 in due course. The Examiner is hereby cordially invited to contact Applicants' undersigned representative by telephone at the number listed below to discuss any outstanding issues.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "William R. Haulbrook", written over a horizontal line.

William R. Haulbrook, Ph.D.

Attorney for Applicants

Goodwin Procter LLP

Exchange Place

Boston, Massachusetts 02109

Customer No. 051414

Date: March 28, 2006  
Reg. No. 53,002

Tel. No.: (617) 570-1013  
Fax No.: (617) 523-1231

1684111